ACASTA HEALTH

Revive Age By Restoring Function

MyAgeMAP™

Live Healthier Longer

MyAgeMAP™ Biological Age

Know your Real Biological Age

Letter from the Founder

Welcome to MyAgeMAP LLC. FZ, and thank you for entrusting us with your health journey through our MyAgeMAP℠ Wellness Test. We are delighted to have you join us as we embark on a collective journey towards improved fitness, health and well-being.

At , MyAgeMAP LLC. FZ our mission is rooted in pioneering innovative solutions that empower individuals to take control of their health. Our commitment drives us to consistently innovate and advance technology, exemplified by the creation of our MyAgeMAP℠ Wellness Test Program and Pipeline of Pre-screening tools. This powerful tool provides invaluable initial insights into overall health, your Real biological age, and longevity, reflecting our relentless pursuit of innovation in health assessment.

Our tests were meticulously crafted by a team of experts spanning medicine, genetics, biotechnology, and wellness. Within your report, you'll discover a comprehensive analysis of your biological age, an essential metric that transcends mere chronological or calendar age and gives a deeper understanding of your True health status. Through the analysis of various biomarkers, we offer personalized recommendations tailored to optimize your well-being.

Your decision to invest in your fitness and health through our wellness test underscores your commitment to prioritizing your well-being and making informed choices for a brighter future. Your dedication is truly inspiring, and I'm honored to be a part of your journey towards a healthier, more vibrant life. Armed with the insights gleaned from your test results, you now possess the knowledge to track your fitness and age in taking smart decisions backed by latest science.

As you explore into your test results, please know that your feedback and experiences are invaluable to us. We continuously strive to enhance the accuracy, accessibility, and usefulness of our wellness test to better cater to your needs and surpass your expectations. Once again, thank you for selecting MyAgeMAP LLC. FZ as your partner in health. It's a privilege to accompany you on your quest for optimal fitness, health and longevity.

Once you are happy with your Biological Age test, explore understanding your complete genomic marker picture with our MyAgeMAP℠ pipeline of tests to enable you to know your organ health, disease risks and gain deeper understanding of your body.

Wishing you continued health and happiness,

Dr. Suresh Poosala DVM MS PhD.,

Ex-Chief of Comparative Medicine at National Institute on Aging,

National Institutes of Health-NIH, Washington DC, USA

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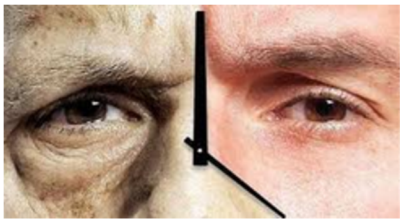
Customer information

ID : XX
Chronological Age: **X** years
Gender : X



Chronological Age
= X

Biological Age
= X

Your Biological age is higher than your chronological age.

Your Biological age is higher than your chronological age. Your biological age based on various biomarkers and clinical factors is X . The biological age calculated here signifies the cumulative effect (positive and negative) of different factors affecting aging. Undisclosed conditions like cancer can have significant effect on your biological age.

Your Test result is a combination of the telomere length and taurine tested on your sample and the data you provided. This combination increases the accuracy of the test and gives a better Biological age estimate.

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Summary Sheet

Core Biological Markers

Section	Indicator
Telomere Length	
Taurine	
Body Mass Index	

Organ & System Health

Section	
Gut Health	
Kidney/ Bladder Health	
Ear Health	
Eye Health	
Neural Health	
Immune Health	
Skin Health	
Metabolic Health	
Respiratory Health	
Skeletal Muscular Health	
Cardiovascular Health	

Life Style Factors

Section	Indicator
Exercise	
Smoking/Chewing	
Alcohol Consumption	
Oral Health/Hygiene	
Diet	
Sleep	
Energy Level	
Dietary Supplement	

Cognitive & Emotional Health

Section	Indicator
Cognitive Health	
Social and Mental Well Being	
Family Medical History	

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1. Telomere length

Telomere length has varied effects on your biological age.

Your telomere length is lower than average for your age-group. Clinically, this suggests **a biologically weaker cellular state. Shorter telomeres are associated with increased cellular aging, reduced replicative potential and tissue repair capacity. They reflect higher exposure to oxidative stress and inflammation—two major contributors to telomere shortening.** Such telomere profiles are often linked to weaker immune function, early onset of age-related diseases, and overall reduced longevity. Individuals with shorter telomeres typically show a increased risk of chronic conditions such as cardiovascular disease, type 2 diabetes, and certain cancers.

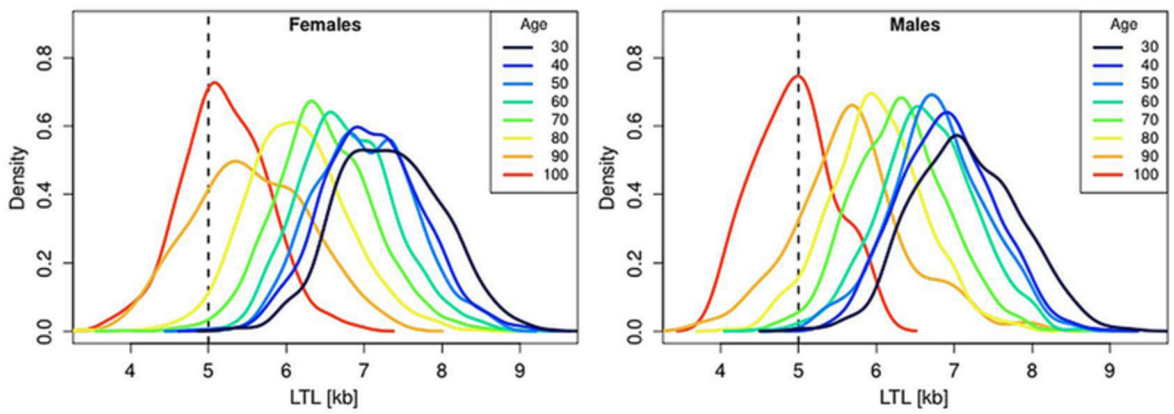

Figure: Telomere length as a function of age for males and Females

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Recommended Plan of Action:

To preserve telomere integrity and slow biological aging, implement structured recovery, metabolic discipline, and cellular protection strategies.

Stress Regulation: Control chronic cortisol exposure with 10–15 minutes of daily breathwork or mindfulness and one dedicated weekly recovery activity.

Sleep Optimization: Maintain 7.5–8.5 hours nightly with a fixed sleep window. Eliminate screens 60 minutes before bed and avoid caffeine after 2 PM to support cellular repair and inflammation control.

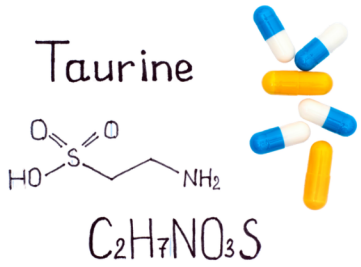
Exercise Prescription: Resistance training 3–4x/week and cardiovascular training 3x/week (30–45 min, Zone 2–3). Add one high-intensity session weekly if medically appropriate to enhance mitochondrial efficiency and telomere stability.

Nutritional Discipline: Eliminate smoking, minimize alcohol, avoid processed meats, refined sugars, and excess saturated fats. Target 30–40g fiber daily and prioritize unsaturated fats (olive oil, nuts, fatty fish).

Metabolic Reset: Adopt a 12–14 hour fasting window, 3–5 days per week, to promote autophagy and reduce oxidative stress.

Cellular Support: Maintain optimal Vitamin D levels, supplement Omega-3 (1–2g EPA/DHA), consider Astragalus extract and targeted antioxidants under medical supervision.

Antioxidant-Rich Intake: Daily inclusion of green tea, dark chocolate (≥70%), leafy greens, legumes, fruits, and seaweed to reduce oxidative DNA damage.



2. Taurine

Your Taurine levels are within lower edge of the average range for your age group

Low taurine levels implies poor cellular health

Your Taurine levels falls within the lower edge of the normal physiological range, indicating inadequate taurine availability to support key biological functions such as cellular osmoregulation, antioxidant defense, and neuromodulation.

Though taurine can be synthesized endogenously, levels can decline due to various factors such as inadequate dietary intake, metabolic stress, or organ dysfunction, particularly involving the liver and kidneys.

It may reflect nutritional deficiency, reduced hepatic synthesis, or increased consumption of taurine due to oxidative stress or chronic inflammation. Additionally, certain health conditions, such as diabetes, cardiovascular disease, or chronic liver disorders, may be associated with reduced taurine availability.

However, clinical interpretation should consider accompanying symptoms, nutritional patterns, and additional biochemical markers for a holistic assessment.

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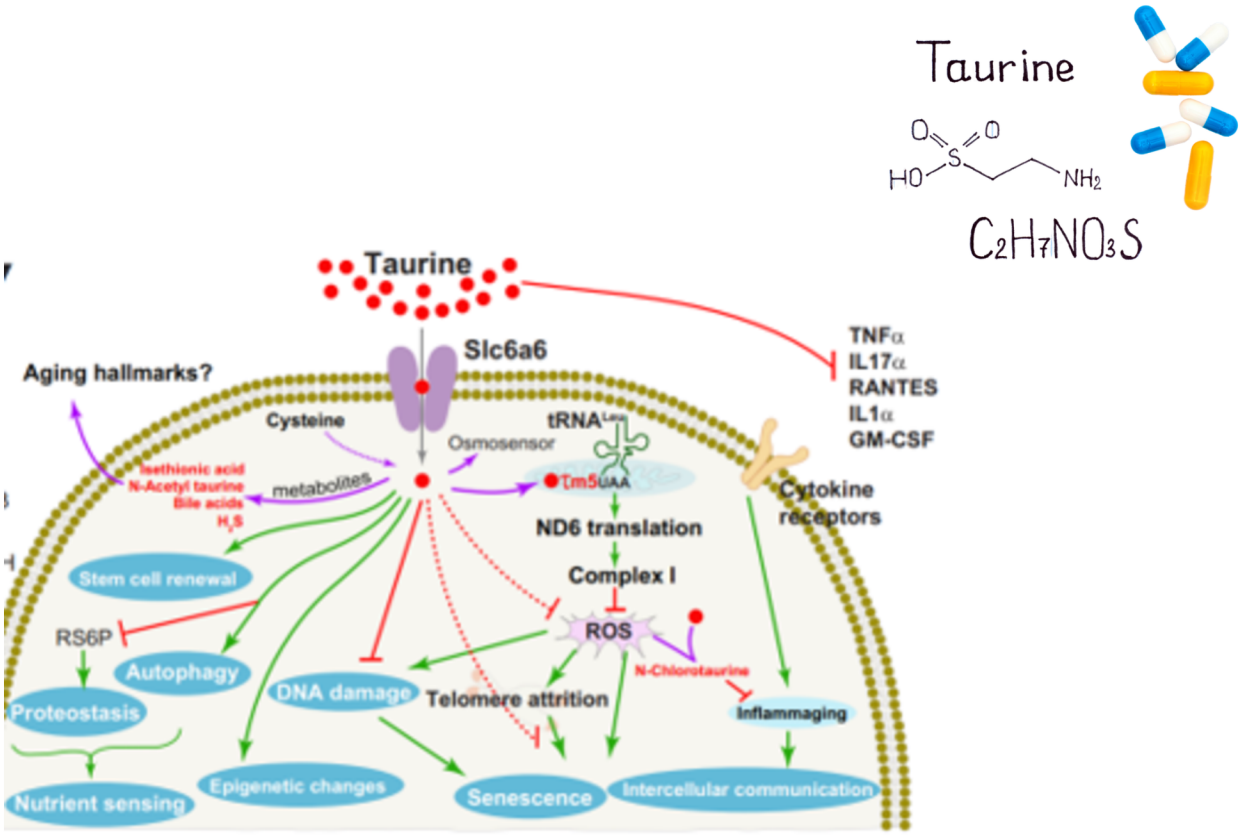

Figure: Aging association: Schematic representation of the effect of taurine and taurine derived biomolecules (in red) on classical hallmarks of aging.

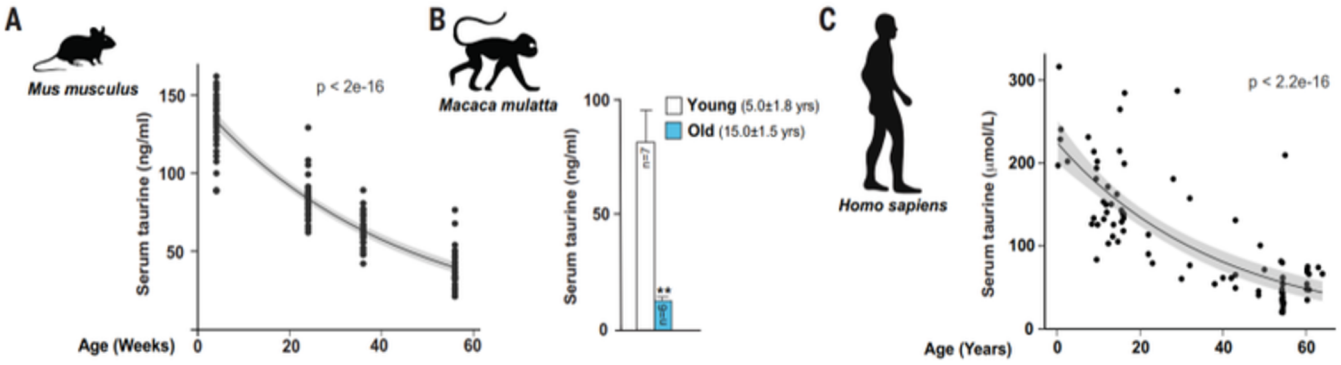

Figure : A. Serum taurine levels in female mice at different ages, B. in young (5-year-old) and old (15-year-old) female monkeys and C. in humans at different ages .

Recommended Plan of Action:

Increase moderate to high-intensity structured exercise, as it significantly supports endogenous taurine production and mitochondrial function. Aim for 3–4 sessions per week, combining resistance training and interval-based cardio (30–45 minutes per session).

Take a Taurine supplement to restore optimal levels. Consider 1,000–2,000 mg daily for 12 weeks, followed by reassessment.

Increase taurine-rich foods such as seafood (especially shellfish and dark fish) at least 3–4 times per week. Include lean meats 1–2 times per week if metabolically appropriate.

Seaweed can be incorporated regularly as a supportive vegetarian option, though taurine bioavailability is lower. Dairy products may also contribute modest amounts if well tolerated.

Reduce alcohol intake and limit ultra-processed foods, as they impair taurine metabolism and increase oxidative stress.

Support taurine utilization with adequate magnesium, vitamin B6, and omega-3 intake to enhance cardiovascular and metabolic resilience.

Disclaimer: Don’t take taurine supplements with medications for low BP.

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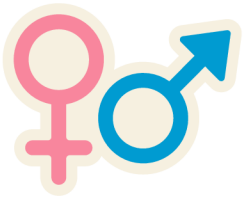

3. Gender

- **Differences between biological compositions and hormonal changes affect the aging process between the genders.**

Gender remains a significant predictor, suggesting differences in biological age between genders. This aligns with known differences in aging trajectories between males and females. Gender accounts for 14% of the influence on an individual's biological age.

4. Exercise

- **You lead a sedentary lifestyle**

Physical activity and exercise are proven strategies to combat the effects of muscle aging. Regular exercise has significant importance in the aging process as it is associated with younger biological age with an importance score of 40 %.

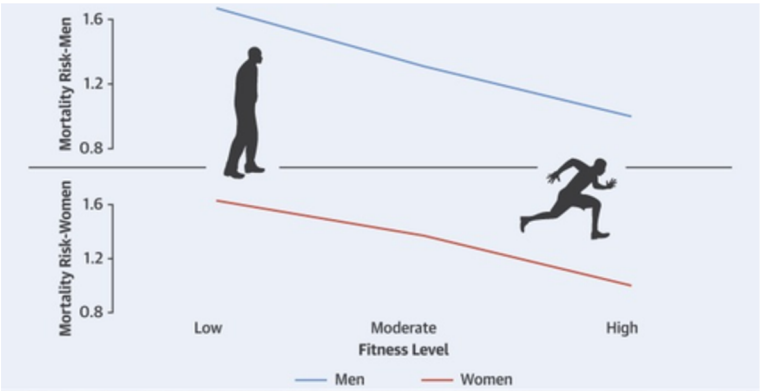

Figure: Mortality risk declines with increasing fitness level in apparently healthy men and women

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5. BMI (Body Mass Index)

- **BMI: 32.5(Ideal range (19-25)**
- **Your BMI is in the higher than the ideal range**

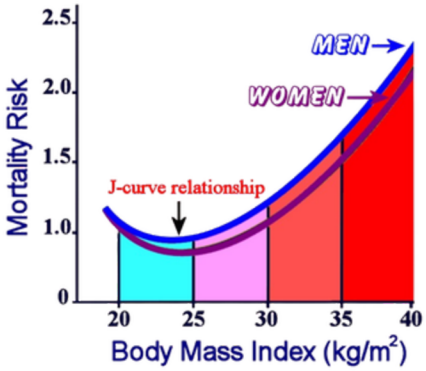

Figure: The relationship between body mass index and mortality forms a J-shaped curve, demonstrating higher rates of death associated with underweight and overweight/obese, with lowest rates of death associated with normal weight

Recommended Plan of Action:

To correct poor BMI and restore metabolic strength, implement a structured muscle-building and metabolic optimization strategy.

Lean Mass Restoration: Target 1.2–1.6 g/kg body weight of protein daily, divided across 3–4 meals. Prioritize high-quality sources such as eggs, fish, lean meats, dairy, and legumes.

Resistance Training: Train 3–4x/week (30–45 minutes) using compound lifts (squats, presses, rows, deadlifts) at 70–85% 1RM, 8–12 reps/set to stimulate muscle growth and testosterone support.

Cardiometabolic Conditioning: Add 2–3 Zone 2 sessions/week (30–40 minutes) to improve insulin sensitivity and mitochondrial efficiency.

Caloric Strategy: If high body fat with low muscle: prioritize body recompositing with high protein and structured resistance training.

Micronutrient & Bone Support: Maintain optimal Vitamin D (40–60 ng/mL), adequate magnesium, zinc, and omega-3 intake. Include loaded, weight-bearing movements.

Daily Movement: Target 8,000–10,000 steps/day to enhance metabolic flexibility and reduce visceral fat risk.

The goal at this stage is not just weight correction, but rebuilding lean mass, metabolic efficiency, and long-term vitality.

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6. Smoking / Chewing Tobacco/Nicotine

- **You are a non- smoker.**
- **In addition to known conditions such as lung cancer caused by smoking, studies have shown that smoking accelerates the aging process significantly.**

A non-smoker is associated with a younger biological age compared to smokers, with an importance score of 22%.

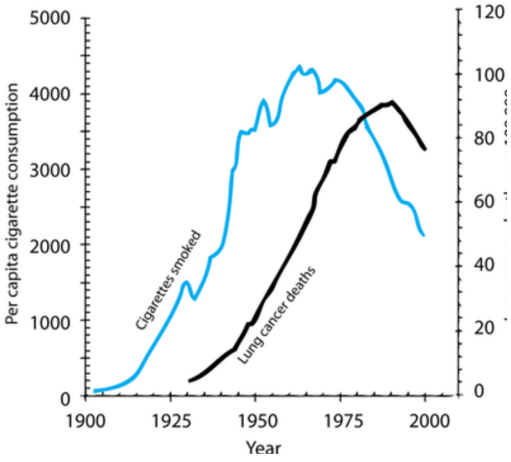

Figure: Correlation between increased Cigarette consumption and incidence of lung cancer, with a lag time

7. Alcohol consumption

- **You do not consume alcohol .**
- **The adverse effect of regular alcohol consumption on the aging process and overall health in general is well established.**

Regular alcohol consumption is associated with higher biological age.

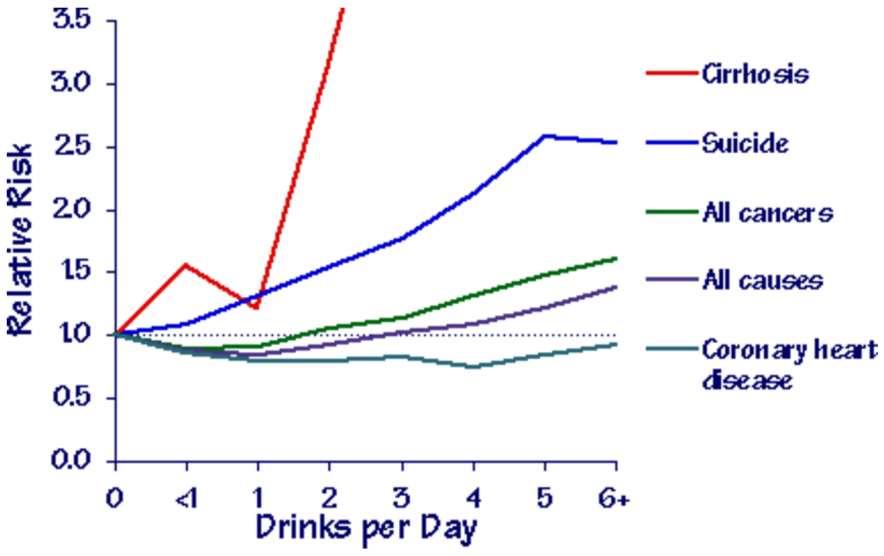

Figure: Alcohol drinking and mortality among men enrolled in the Cancer Society prospective study

8. Oral Health/Hygiene

- **You have minor oral health issues which implies average oral health compared to your peer group**

As populations age, the prevalence of chronic diseases, including those affecting the oral cavity, will rise.

Maintaining oral health and function is essential to healthy aging; it influences systemic, cognitive, and psychological health and supports crucial functions like eating, which is essential for nutritional health in older adults.

Recommended Plan of Action

- Use an extra-soft toothbrush with gentle technique, floss or use interdental brushes daily, and rinse with an antimicrobial mouthwash to reduce plaque and infection risk. Stay well hydrated to manage dry mouth.
- Schedule frequent dental checkups for early detection and management of gum disease, cavities, and complications from missing or damaged teeth.
- Limit sugar intake, choose nutrient-rich foods that support gum health, and avoid smoking to slow disease progression and protect overall health.

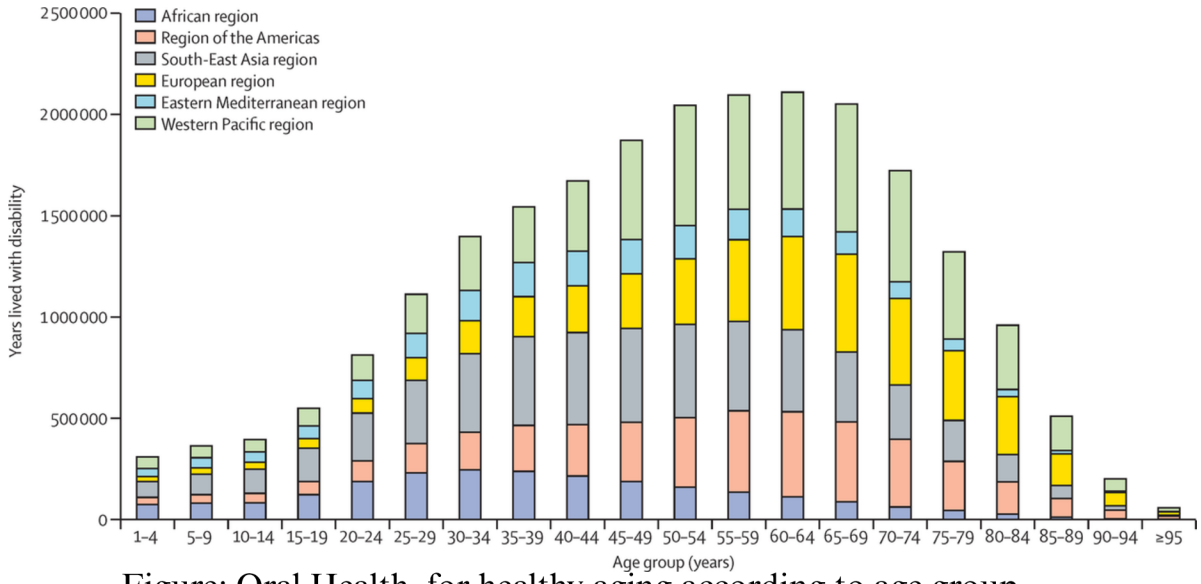

Figure: Oral Health for healthy aging according to age group

9. DIET

You do not eat frequently throughout the day and stick to your meal routine.

If you prefer eating two main meals a day with snacks in between or less, focus on making each meal nutrient-dense by including a balance of lean proteins, healthy fats, whole grains, and a variety of fruits and vegetables. Since your meal frequency is lower, aim for larger, well-rounded portions that provide sustained energy. Choose snacks like nuts, yogurt, or protein-based options to maintain stable blood sugar levels and prevent energy crashes.

Recommended Plan of Action:

Stay well-hydrated throughout the day and limit sugary or processed snacks. Focus on nutrient-dense, balanced meals eaten mindfully to meet your nutritional needs and support overall well-being.

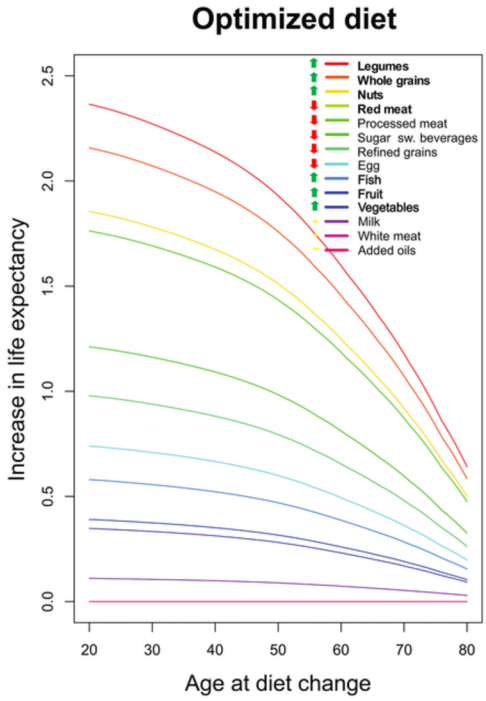

Figure: Pattern of healthy aging according to age group

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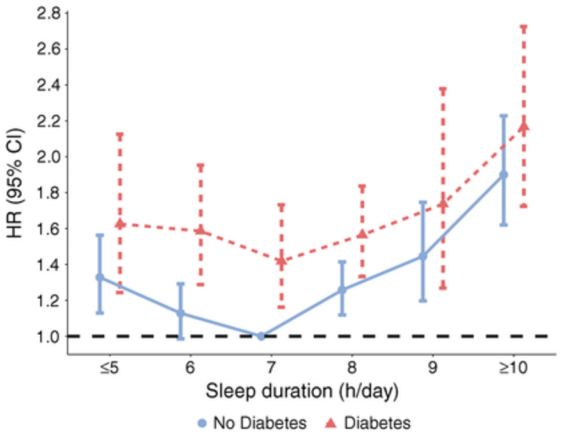
10. Sleep

- **You usually get 5–7 hours of sleep per night on average**

Sleeping 6–8 hours is linked to a younger biological age, with an importance score of 31 %, as sleep restores energy, sharpens mental focus, and enables essential cellular repair—contributing meaningfully to longevity.

Figure: Adjusted mortality risk according to sleep duration stratified by type 2 diabetes



Recommended Plan of Action:

Go to bed and wake up at the same time every day, even on weekends. This helps regulate your body's internal clock and can help you fall asleep and wake up more easily.

Engage in calming activities before bed, such as reading, taking a warm bath, or practicing relaxation techniques like meditation or deep breathing exercises.

Reduce exposure to bright screens and lights in the evening. The blue light emitted by phones, tablets, computers, and TVs can interfere with your sleep cycle by tricking your brain into thinking it’s still daytime.

Make sure your bedroom is cool. Your body temperature naturally decreases to initiate sleep. A bedroom temperature between 60 and 67 degrees Fahrenheit helps promote sleep.

Complete your meals 3-4 hours before your bedtime.

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11. Energy levels

Currently, you experience occasional dips in your daily energy levels

If you experience occasional dips in energy, factors like dehydration, stress, and inadequate sleep may be playing a role. Fatigue is a feeling of weariness, tiredness, or lack of energy. Fatigue can stem from emotional stress, such as anxiety, financial worries, or personal conflicts, which may drain your mental and physical energy. Ensuring proper hydration and consuming nutrient-rich meals with a balance of proteins, whole grains, and healthy fats can help stabilize energy levels

Recommended Plan of Action (Occasional Energy dips)

Prioritize 7.5-8.5 hours of quality sleep and maintain consistent sleep–wake times.

Eliminate screens 60 minutes before bed and limit caffeine after 2 PM to restore circadian rhythm and cellular recovery.

Stay well hydrated and eat balanced, nutrient-dense meals to support energy levels.

Engage in low-to-moderate intensity aerobic exercise (brisk walking or cycling) 30 minutes, 5 days per week, maintaining 60–70% of maximum heart rate; add resistance training 2–3 times weekly to improve metabolic efficiency and testosterone support.

Manage emotional stress through mindfulness, relaxation practices, or professional support if needed.

If low energy persists within 6–8 weeks of adherence despite these steps, consult a healthcare professional for further evaluation.

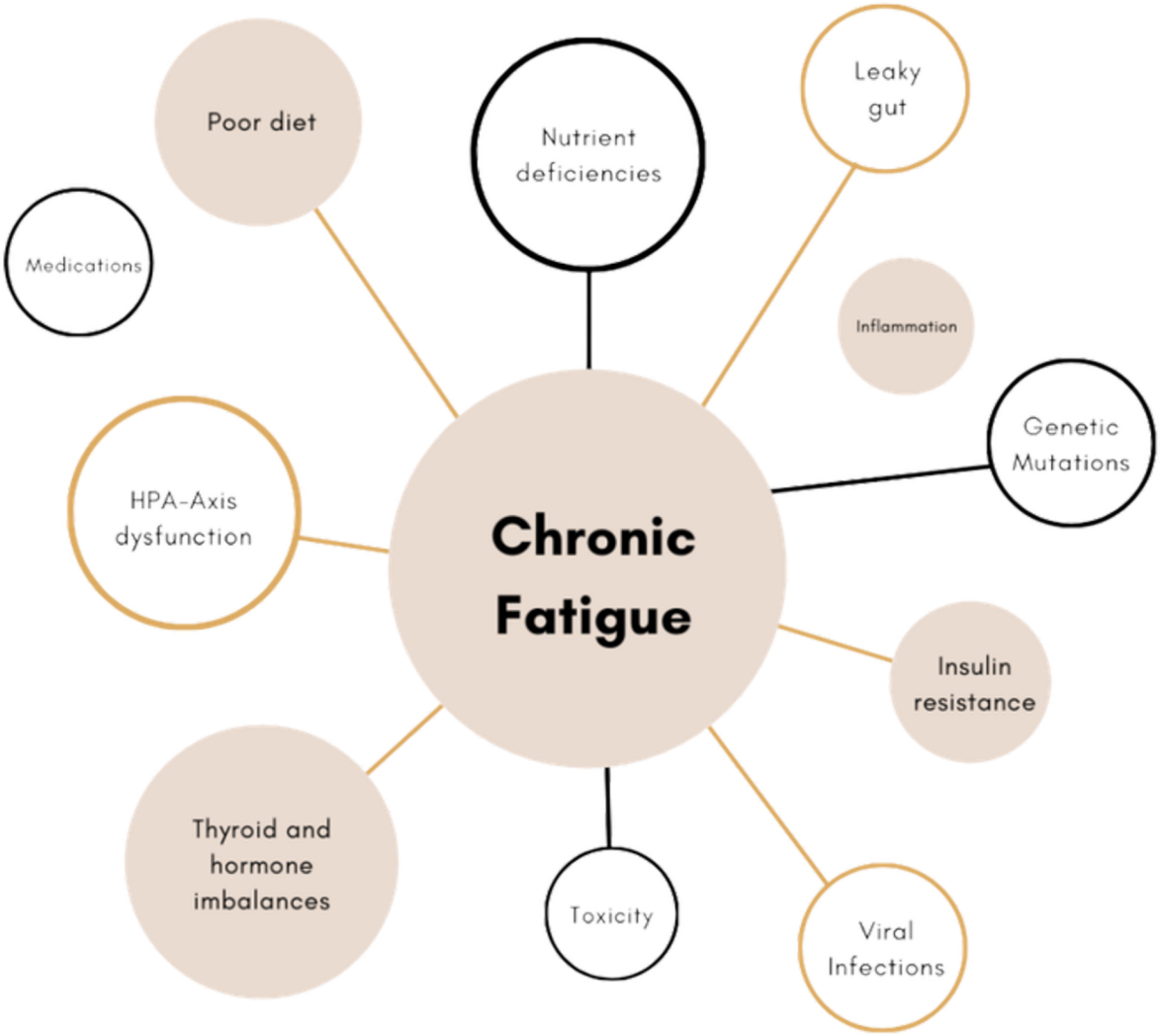

Figure: Root causes for Chronic fatigue

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12. Dietary Supplements

If you DO NOT TAKE any supplements like vitamins, minerals, protein drinks, electrolytes and probiotics, focus on meeting nutrient needs through a well-balanced diet rich in fruits, vegetables, whole grains, lean proteins, and healthy fats. Stay well hydrated, include probiotic-rich foods such as yogurt or fermented vegetables, and support overall health with regular exercise, adequate sleep, and stress management.

Vitamin D is essential for bone health, immune function, and overall well-being. Support Vitamin D levels through safe sunlight exposure and dietary intake, and take it with meals containing healthy fats for better absorption. Regular blood tests and guidance from a healthcare professional can help ensure optimal levels and appropriate dosing.

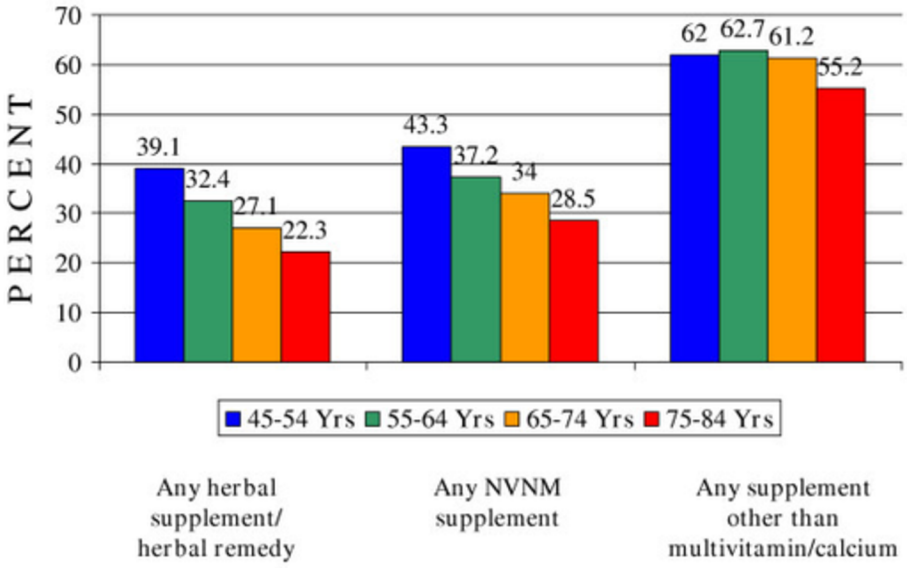

Figure: Difference in dietary supplement by age cohort

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13. Gut Health

- **You have poor gut health compared to your peer group**

Gut health is essential for digestion, immunity, and overall well-being. Poor hydration can disrupt digestion, alter gut bacteria balance, and contribute to constipation, fatigue, and reduced mental focus.

Recommended Plan of Action

Increase fiber intake to 30–40 g per day (vegetables, legumes, low-glycemic fruits, whole grains; distributed across 2–3 structured meals) to restore stool consistency and microbiome diversity. Escalate gradually over 2–3 weeks to avoid bloating.

Introduce one serving of fermented food daily (kefir, yogurt with live cultures, sauerkraut) and one prebiotic source daily (onions, garlic, green banana, oats) to actively rebuild beneficial gut flora.

Adopt 3 fixed meals per day with a 12–14 hour overnight fasting window (last meal ≥3 hours before sleep) to normalize gut motility and circadian digestive rhythms.

Engage in 30–45 minutes of moderate-intensity physical activity, 5 days per week and implement 10–15 minutes of daily stress regulation (breathwork or meditation) to rebalance the gut–brain axis and reduce inflammatory signaling.

14. Kidney/ Bladder Health

- **Your bladder health is good compared to your peer group**

Recommended Plan of Action:

Maintain good bladder health by staying well-hydrated, eating a balanced diet rich in anti-inflammatory and antioxidant foods, and limiting bladder irritants like caffeine and alcohol. Managing overall metabolic health further helps preserve bladder function as you age.

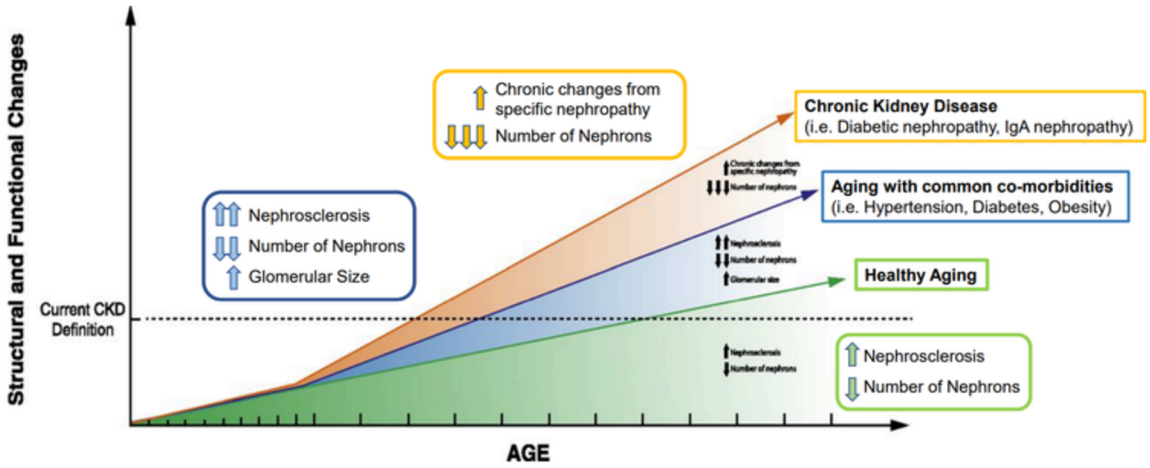
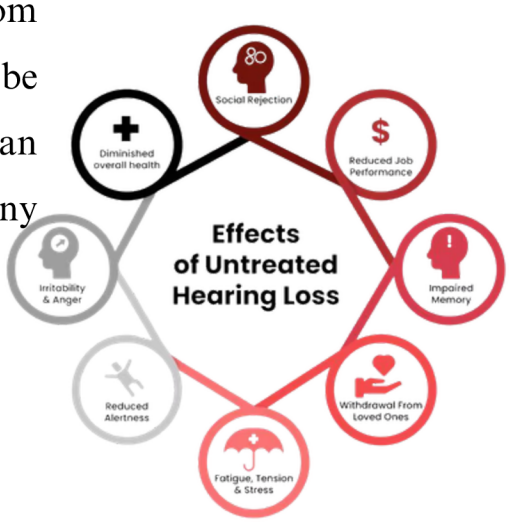


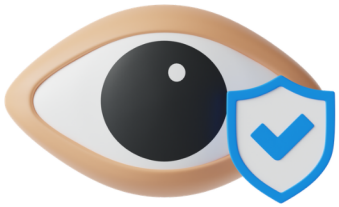
Figure: Structural and functional changes in the kidney from common comorbidities or specific kidney diseases are additive to the underlying age-related changes that occur even in health from newborn to centenarian

15. Ear Health

- **You have good ear health**

To preserve hearing as you age, protect your ears from prolonged loud noise, manage ear hygiene, and be mindful of medications that may affect hearing; seek an audiologist or ENT evaluation if you notice any changes in hearing or balance.





16. Eye Health

- **Your eye health is good compared to your peer group**

Although normal aging affects vision through changes in the cornea, pupils, and lens, maintaining good eye health is important, as it significantly influences biological age and supports daily functions like reading and driving.

Recommended Plan of Action:

Maintain good eye health by protecting your eyes from UV exposure, avoiding smoking, and following a nutrient-rich diet that supports vision. Stay physically active, manage blood pressure, reduce screen strain with the 20-20-20 rule, and ensure adequate intake of key eye-supportive nutrients to preserve long-term visual health.

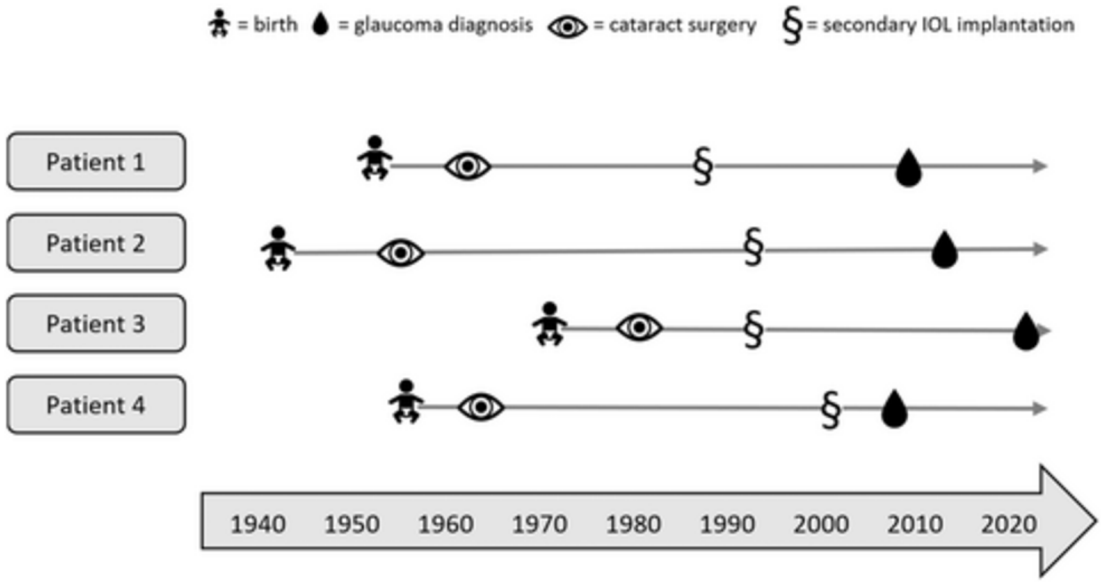


Figure: The plot shows the estimated risk of glaucoma or ocular hypertension from 18 years and onwards for patients who had cataract surgery before the age of 18 years and were not diagnosed with glaucoma or ocular hypertension before age 18.

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17. Neural Health

- **Your neural health is good compared to your age group**

Recommended Plan of Action:

Continue supporting cognitive resilience through regular physical activity, a balanced diet rich in B vitamins and essential electrolytes, mentally stimulating activities, quality sleep, and healthy lifestyle habits, while maintaining routine health checkups.

Figure: Risk factors for Ischemic Stroke

18. Immune Health

- **Your immune health is good compared to your age group**

Recommended Plan of Action:

Maintain this strength by continuing regular physical activity, eating a nutrient-rich diet with key immune-supporting vitamins and minerals, prioritizing quality sleep, and managing stress to support optimal immune function.

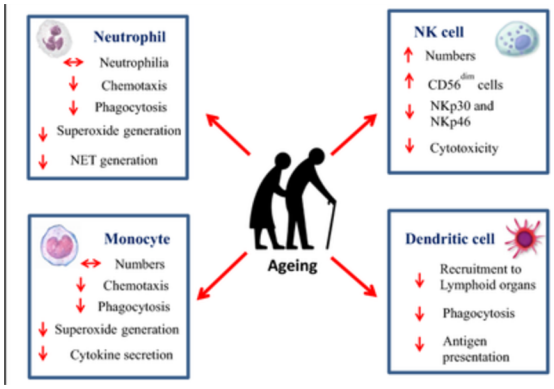

Figure: Factors indicating aging in immune system

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19. Skin Health

- **You have average skin health compared to your peer group**

In the 40s, cumulative sun exposure can begin to affect collagen, elastin, and pigment regulation. Prolonged UV exposure accelerates skin aging and can stimulate pigment-producing cells, leading to uneven skin tone and age spots. Early signs often include mild pigmentation changes, reduced skin elasticity, and gradual texture changes. Managing sun exposure and supporting skin repair are important for maintaining long-term skin health.

Recommended Plan of Action

Apply a broad-spectrum SPF 30–50 sunscreen daily, especially during outdoor exposure, to prevent UV-induced pigmentation and collagen breakdown.

Use topical antioxidants such as vitamin C or niacinamide once daily to support skin repair and help regulate pigmentation.

Consume an antioxidant-rich diet including fruits, vegetables, nuts, and healthy fats to help counter oxidative stress affecting skin cells.

Schedule periodic dermatology evaluations if pigmentation changes increase or become persistent.

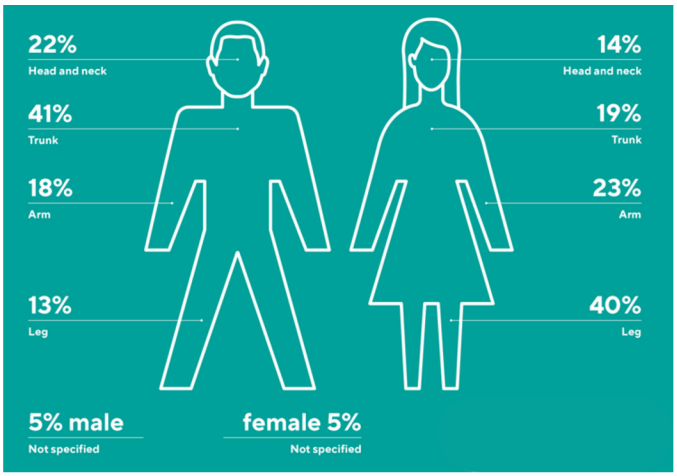
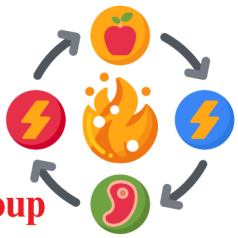


Figure: Skin Cancer risk as per gender



20. Metabolic Health

- **Your Metabolic health is poor compared to your peer group**

Your metabolic health is below average for your age group, which increases the risk of conditions such as type 2 diabetes, dyslipidemia, and thyroid dysfunction.

Family history can raise susceptibility—for example, having one parent with type 2 diabetes increases lifetime risk to ~40%, and up to ~70% if both parents are affected. Genetics can also influence cholesterol levels and thyroid function, but these conditions are strongly shaped by lifestyle factors.

During the 40s, metabolic health is particularly sensitive to behaviors such as diet quality, physical activity, sleep patterns, smoking, and alcohol intake. Poor metabolic regulation can accelerate biological aging through increased inflammation and oxidative stress, contributing to faster cardiovascular and systemic decline.

If blood sugar regulation is already impaired (prediabetes or diabetes), careful monitoring and medical management become important to prevent further metabolic deterioration and long-term complications.

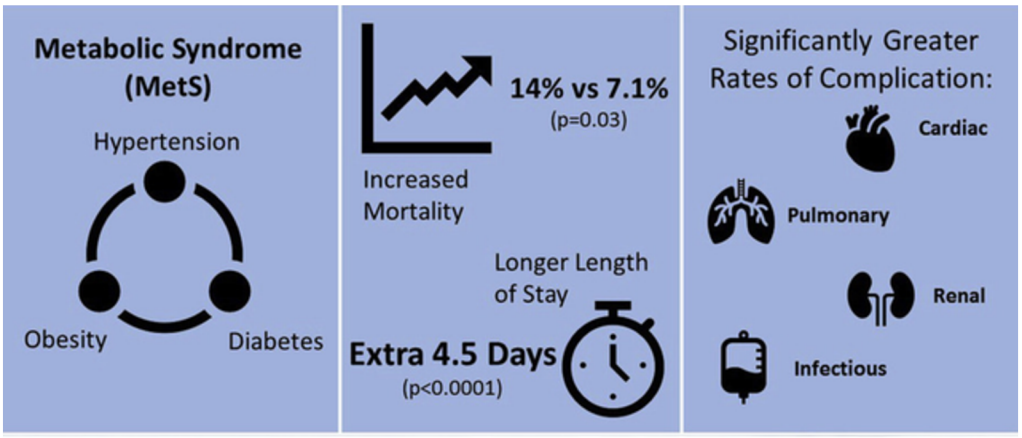


Figure: Metabolic syndrome - A major risk factor for morbidity and mortality in severely Injured Trauma Patients

Recommended Plan of Action:

Replace animal and saturated fats with plant-based fats daily: use olive oil or avocado oil for cooking, consume a handful of nuts/seeds 5–6 days/week, and include fatty fish 2–3 times/week to improve insulin sensitivity and lipid profile.

Consume 30–35 g of dietary fiber per day, distributed across meals (vegetables, legumes 4–5 times/week, whole grains daily) to enhance glycemic control, reduce abdominal adiposity, and support weight regulation.

Perform moderate-to-vigorous aerobic exercise 5 days/week (30–45 minutes at 65–75% max heart rate) and include resistance training 2–3 times/week to improve glucose uptake, muscle insulin sensitivity, and metabolic rate.

Eliminate smoking completely and limit alcohol to ≤2 standard drinks per occasion, ≤2–3 times/week, to reduce inflammation, hepatic stress, and cardiometabolic risk.

Maintain 7–9 hours of consistent sleep nightly, with fixed sleep–wake timing; seek clinical evaluation if experiencing snoring, insomnia, or daytime fatigue to reduce metabolic disruption.

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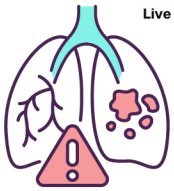
21. Respiratory Health



- **You have good Respiratory health compared to your peer group**

As lung function and muscle strength naturally decline with age, maintaining good respiratory health through regular physical activity, breathing efficiency, and cardiovascular fitness helps support optimal oxygen exchange and overall well-being.

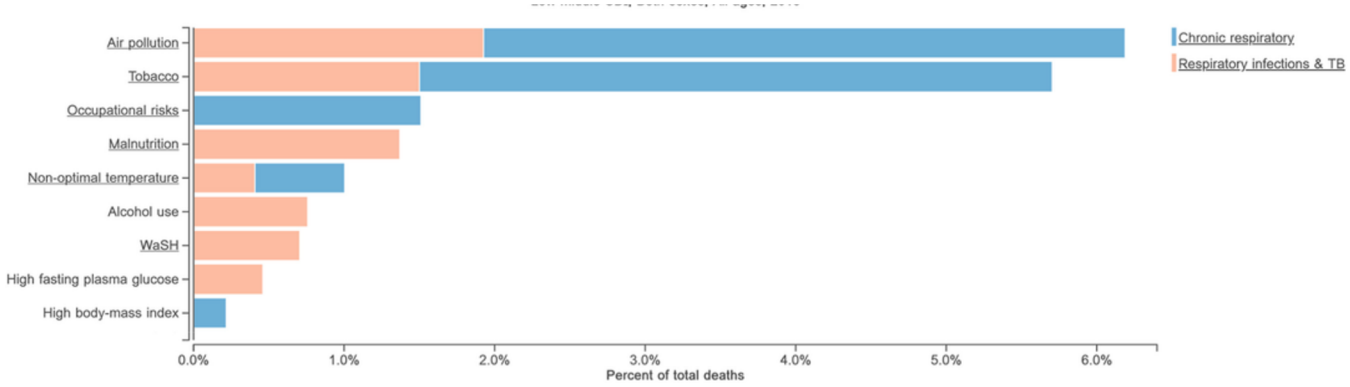


Figure: The graph shows health equity and respiratory diseases in low- and middle-income countries, includes both genders and all ages.

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22. Skeletal Muscular Health

- **Your Skeletal Muscle Health is poor compared to your peer group**

Your skeletal muscle health is below average for your age group, which may be influenced by low participation in strength-based physical activity. Beginning in the 40s, the body naturally experiences a gradual decline in muscle mass and strength (sarcopenia), driven by reduced muscle protein synthesis, lower mitochondrial activity, and physical inactivity.

In your case, the presence of osteoporosis or osteoarthritis may further affect musculoskeletal health. Osteoarthritis involves the gradual breakdown of cartilage in joints—commonly affecting the knees, hips, hands, and spine—leading to stiffness, pain, and reduced joint mobility. Osteoporosis, on the other hand, is characterized by reduced bone density and increased fracture risk, often developing silently until symptoms such as height loss, back pain, or fractures occur.

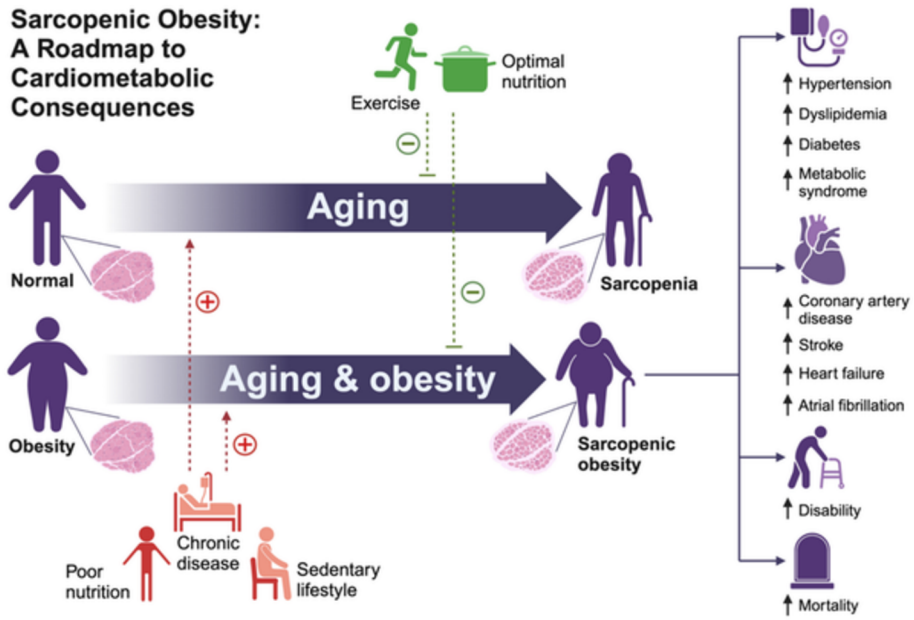


Figure: Gain of fat mass (obesity) and loss of skeletal muscle mass and function (sarcopenia) are expected changes with aging. However, individuals with obesity are at an increased risk for accelerated sarcopenia.

Together, reduced muscle mass and underlying bone or joint conditions can impact overall mobility, stability, and long-term musculoskeletal resilience.

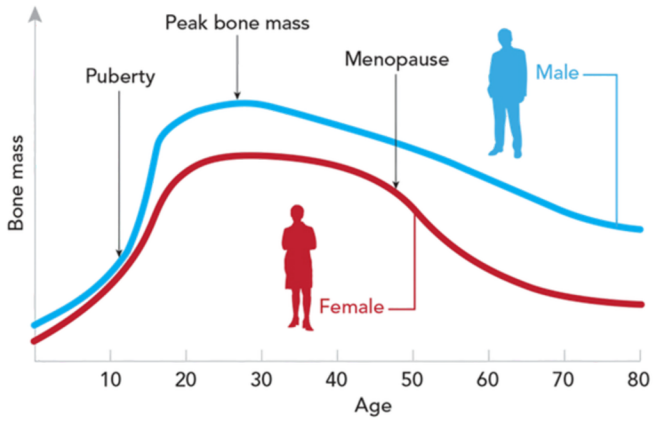


Figure: Bone mass by gender and age group

Recommended Plan of Action:

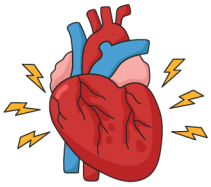
Increase aerobic exercise (walking, cycling) and strength training (weight lifting); add flexibility and balance activities like yoga.

Consume 1.2–1.6 g protein/kg body weight daily from lean meats, dairy, or legumes. Eat antioxidant-rich foods and include omega-3 sources (fish, flaxseeds, walnuts).

Get 7.5–8.5 hours of sleep nightly and manage stress with meditation or deep breathing. Take short activity breaks to avoid prolonged inactivity.

Ensure adequate vitamin D and calcium intake. Use creatine to enhance muscle strength during resistance training. Take fish oil supplements if omega-3 intake is low.

Schedule regular health check-ups. Monitor muscle mass, strength, and function.



23. Cardiovascular Health

- **Your Cardiovascular Health is good compared to your peer group**

Cardiovascular health significantly influences biological aging. Maintaining vascular health helps reduce inflammation, oxidative stress, and age-related cardiovascular decline.

Recommended Plan of Action:

Continue supporting heart health with a Mediterranean-style diet rich in fruits, vegetables, fiber, and omega-3s, regular aerobic exercise, adequate hydration, mindful fasting if suitable, and limiting excess sodium and added sugars to preserve long-term cardiovascular function.

24. Cognitive Health

- **Your cognitive health is good compared to your peer group**

Older adults face increased risks of cognitive impairment and dementia due to genetics or early life environment.

Recommended Plan of action:

Maintain brain vitality by reading daily, engaging in cognitive activities, exercising regularly (150 min/week), following a balanced diet (Mediterranean or DASH), getting 7.5–8.5 hours of sleep, and pursuing lifelong learning. These habits support memory, focus, and long-term cognitive resilience.

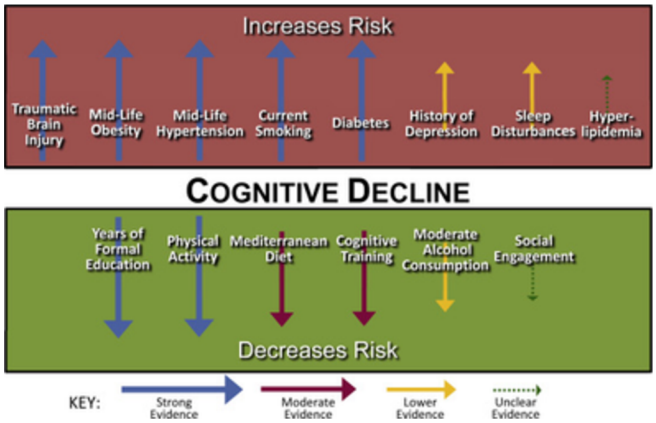


Figure: Strength of evidence on risk factors for cognitive decline

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25. Social and Mental Well Being

You do not have regular social interactions, hobby or practice meditation or nature walks

Research in social epidemiology suggests that the absence of positive social relationships is a significant risk factor for broad-based morbidity and mortality. Humans are inherently social, and strong connections support mental and physical health.

To enhance social well-being, join clubs, hobby groups, or community events, volunteer, and engage in group activities or exercise. Start small, nurture relationships, and stay open to new experiences, building connections takes time.

Figure: Social determinants of mental disorders and the Sustainable Development Goals

26. Family Medical History

- **Genetic predisposition to major conditions, such as Blood Pressure, Diabetes Cardiac conditions and Stroke increases the probability of epigenetic changes related to accelerated aging.**
- **It also increases the chances of you having undiagnosed hereditary conditions currently.**

Family medical history gives a glimpse into individual genetics, which plays a pivotal role in the aging process.

Diagnosed by diabetes or being predisposed to diabetes, might result in high predisposition to cancer development specifically due to contributors such as strong metabolic stress factors with consequently excessive production of ROS and mitochondrial dysfunction.

A family history of high blood pressure is linked to other heart disease and stroke risk factors, such as high cholesterol, high body fat, and sensitivity to salt. These factors can increase your risk for heart disease and stroke, even if you don't have high blood pressure yourself.

A family history of heart disease is linked to stroke risk factors, such as high cholesterol, high body fat, and sensitivity to salt. These factors can increase your risk for heart disease and stroke, even if you don't have high blood pressure yourself.

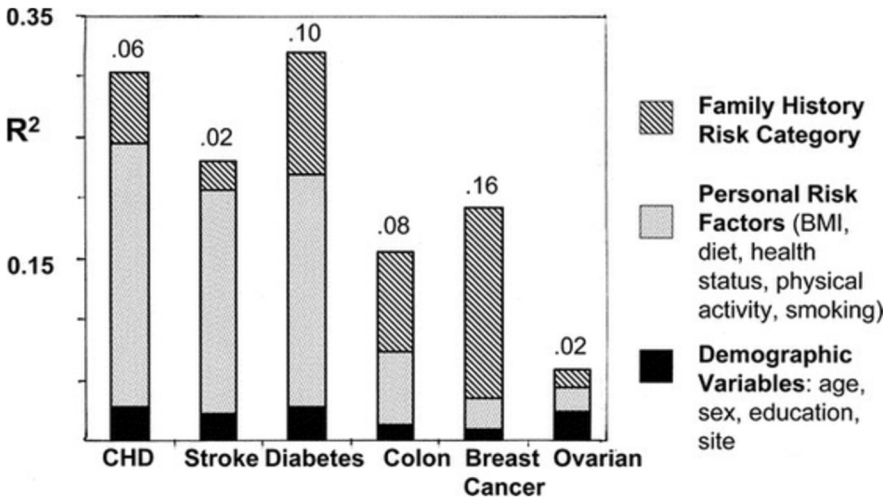

Figure: Family history accounts for a significant portion of the variance in perceived risk of common diseases. It shows the results of stepwise regression analyses of perceived risk for each disease.

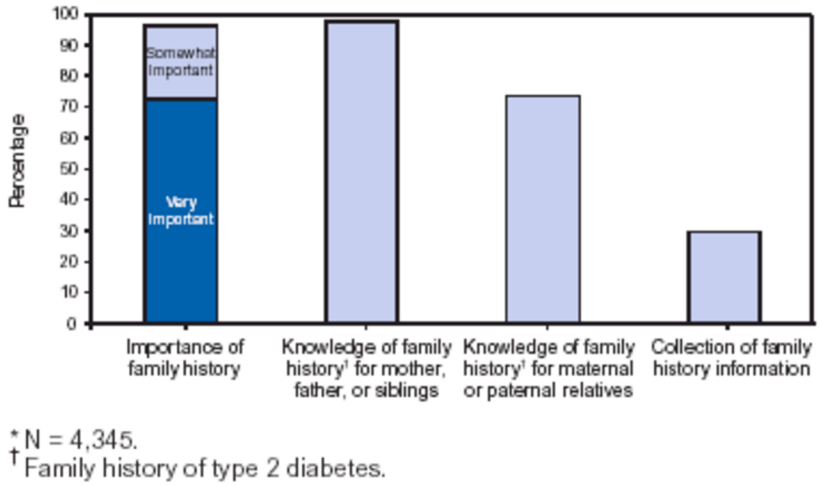

Figure: Percentage of respondents reporting importance of family history to their personal health, knowledge of family history of type 2 diabetes.

Recommended Plan of Action:

The American Diabetes Association recommends that people with prediabetes lose at least 7% to 10% of their body weight to prevent disease progression. More weight loss will translate into even greater benefits.

Include DASH (Dietary Approaches to Stop Hypertension) diets and have a heart-healthy eating style.

Decrease simple sugar and salt intake.

Unsaturated fats — both monounsaturated and polyunsaturated fats — promote healthy blood cholesterol levels and good heart and vascular health.

Limit intake of fried foods and red meat. Focus on a diet rich in fruits, vegetables, and whole grains

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Expert Review Summary

Overall, telomere length is below the healthy range and taurine levels are average. In addition, factors such as family history of diabetes, blood pressure , cardiac and stroke , high BMI , and below-average functional health metrics may be contributing to a higher Biological Age.

Biological Age reflects modifiable physiological patterns. Following the recommended nutrition, lifestyle, and functional health strategies may help support cellular health and positively influence the aging trajectory over time.

Daily Longevity Action Plan (Quick Reference)

Sleep & Recovery: Maintain 7.5–8.5 hours of sleep nightly with a consistent sleep schedule. Avoid screens 60 minutes before bed and limit caffeine after early afternoon.

Exercise & Movement: Perform resistance training 3–4x/week (30–45 min) and aerobic exercise 4–5x/week (30–45 min) such as brisk walking, cycling, or jogging. Aim for 8,000–10,000 steps daily.

Nutrition Foundation: Follow a Mediterranean-style diet emphasizing vegetables, fruits, legumes, whole grains, nuts, olive oil, and fatty fish (2–3x/week). Target 30–40 g fiber daily and adequate protein (~1.2–1.6 g/kg body weight). Limit processed foods, refined sugars, and excess saturated fats.

Meal Timing & Metabolism: Maintain 3 structured meals per day with a 12–14 hour overnight fasting window to support metabolic and digestive health.

Gut & Nutrient Support: Include one fermented food daily and prebiotic foods such as onions, garlic, oats, and legumes. Ensure adequate vitamin D, omega-3s, magnesium, and zinc, and increase taurine-rich foods like seafood.

Lifestyle & Risk Reduction: Avoid smoking, limit alcohol, reduce excess sodium and added sugars, and maintain a healthy body weight.

Stress & Preventive Care: Practice 10–15 minutes of daily stress management and schedule regular health check-ups to monitor blood pressure, glucose, lipids, and key metabolic markers.

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Limitation of technology

The current limitation of this technology is the lack of reference databases for the region specific population. As our database strength increases the accuracy and reliability of the results will improve further.

Disclaimer

The test result does not serve as a diagnostic assessment. Its purpose is predictive screening for preventive wellness measures. It can help identify potential health risks or areas for improvement and provide personalized lifestyle recommendation plans. However, it is important to consult with a healthcare professional for a comprehensive clinical evaluation.

Key Terms:

1. **Kb :** Kilobase pair, is how scientists measure the length of telomeres, the protective caps on DNA. It's like measuring the length of shoelaces. One KB is around 1,000 building blocks of DNA. So, when they say a telomere is 10 KB long, it means it's made up of about 10,000 building blocks. Essentially, it is a measure of how long your DNA's protective caps are, which is linked to cellular aging and overall health.
2. **Senescence:** The biological process of aging, encompassing a gradual decline in physiological functions and an increased susceptibility to diseases. In cellular biology, it also refers to the state of irreversible cell cycle arrest triggered by factors like DNA damage or aging.

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